

REMARKS

Independent claims 1, 7, and 18

The Examiner rejected independent claims 1, 7, and 18 as being unpatentable over Buchin (U.S. 5,475,420) in view of Homma (U.S. 5,272,538) and Konishi (U.S. 6,208,385). The Examiner acknowledges that "Buchin and Homma are both silent with regard to determining an actual image area from a luminance component having an average duration proportional to the actual image area." The Examiner cites Konishi as disclosing this feature and argues that "it would have been obvious at the time of the invention to have Buchin's video image processing system include the image detection area system described by Konishi."

We submit however that neither patent discloses an apparatus (claims 1 and 18) or a medical instrumentation system (claim 7) comprising image size detection circuitry, ..., for continuously identifying the actual image area within the total image area of the image sensor, and generating a control signal, based on the actual image area determined from a luminance signal component having a signal level greater than a predetermined threshold over an average duration proportional to the actual image area, for controlling the electronic shutter, as recited in amended claims 1, 7 and 18.

For example, in certain embodiments, the actual image area is determined by measuring the average duration of a luminance signal from a line scanned across the actual image area. When the scan traverses the actual image area, the luminance signal surpasses a predetermined threshold. The average duration of the luminance signal (at a level above the threshold) is proportional to the size of the actual image area. Therefore, the actual image area may be determined from the average duration over which the luminance signal is greater than the predetermined threshold (see Applicants' specification on pages 13 and 14).

Konishi, by contrast, determines an average luminance signal within a plurality of columns overlying a total letterbox image area and calculates the difference between the luminance averages of a first column and a prior column (see col. 10, lines 9-15). As described in Konishi on col. 10, lines 16-23, if the difference is determined to be greater than an upper threshold, Konishi determines that a black band is present above the actual image (i.e., an upper

edge has been detected) within the column. Likewise, if a difference is determined to be lower than an lower threshold, Konishi determines that a black band is present below the actual image (i.e., a lower edge has been detected) within the column. Konishi then counts the number of upper and lower edges detected in each column (see col. 10, lines 42-52). By analyzing the total number of upper and lower edges detected in each of the columns, Konishi determines the true top and bottom picture area end data without mistaking the bottom line of the caption band as the bottom picture edge (see col. 11, lines 33-36).

There is nothing in Konishi that discloses or suggests, explicitly or inherently, that the actual image area may be determined from a luminance signal component having a signal level greater than a predetermined threshold over an average duration proportional to the actual image area. Applicant's argue that the size of the actual image area (i.e., the non-black area) described in Konishi would not inherently be proportional to the duration of time over which the luminance signal is greater than a threshold because the luminance signal could pass below the threshold within the actual image area. For example, the actual image area could include dark areas that have the same luminance as the black bands. Furthermore, there is nothing in Konishi that describes or suggests a luminance signal having a signal level greater than a predetermined threshold. Rather, Konishi describes a difference between two averages of a luminance signal being greater than a threshold. For the foregoing reasons, claims 1, 7, and 18 are patentable.

Independent claim 13

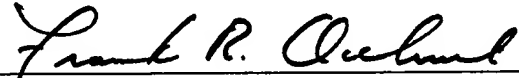
The Examiner rejected claim 13 as being unpatentable over Buchin in view of Homma and Konishi. We also submit that the combination of Homma, Buchin, and Konishi neither discloses nor suggests a method of controlling an electronic shutter that includes continuously identifying,..., the actual image area within a total image area,..., the actual area determined from a luminance signal component having a signal level greater than a predetermined threshold over an average duration proportional to the actual image area..., as recited in amended independent claim 13. As discussed above, neither Buchin, Homma, nor Konishi disclose continuously determining an actual image area in this manner.

Each of the claims depending on one of independent claims 1, 7, 13, and 18, are patentable for at least the same reason as the claim on which they depend is patentable. It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Enclosed is a \$1500 check for the Petition to Revive an Unintentionally Abandoned Application. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket Number 00167-318001.

Respectfully submitted,

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